REMARKS

Reconsideration of the application, as amended, is respectfully requested.

Denzinger discloses a copolymer comprising at least 3 different monomers a)-c), whereby monomers a) are vinyl esters of C_1-C_4 aliphatic carboxylic acids, monomers b) are N-vinyl lactams, and monomers c) are basic nitrogen containing monomers. Denzinger introduces a third essential monomer in combination with the vinyl ester and N-vinyl pyrrolidone (a N-vinyl lactam) and as such does not disclose the copolymer of the present invention. Furthermore, the vinyl esters disclosed by Denzinger do not fall within the formula (I) of amended claim 1. Column 1 lines 59-64 discloses the vinyl esters of C_1-C_4 carboxylic acids, these give rise to vinyl esters whereby the R^1 group of formula (I) of claim 1 has from 0 to 3 carbon atoms, which are clearly outside the claimed range. It is important to note that a carboxylic acid of C_4 makes an ester with a C_3 alkyl chain as per formula (I) of claim 1 (as the other carbon atom of the acid is the CO group of the vinyl ester).

With respect to obviousness, Denzinger teaches that comonomer c) is essential. One of ordinary skill in the art would not have been led by Denzinger to exclude such a monomer to arrive at copolymers similar to those claimed in present claim 1. Furthermore, one would not have been led to use carboxylic acids of at least C_7 in length to make a vinyl ester with an R^1 group of at least 6 carbon atoms. By contrast, the present claim 1 recites a hydrophobic alkyl chain (i.e. more carbon atoms in the alkyl chain).

Kud discloses a laundry detergent composition comprising a graft polymer obtainable by grafting a) a polyalkylene oxide, b) N-vinylpyrrolidone, and c) a vinyl ester of a saturated monocarboxylic acid containing from 1 to 6 carbon atoms. The differences between Kud's disclosure and subject matter of the present claim 1 are numerous. First, Kud's is a graft polymer, not a copolymer. Therefore the polymer of Kud will not be a copolymer having a vinyl pyrrolidone backbone and pendant hydrophobic chains. Second, as in Denzinger, a third essential element is present (the polyalkylene oxide), hence the copolymer of claim 1 is not clearly and unambiguously disclosed by itself. Finally, even if the above points are not enough

to clearly differentiate, the vinyl ester is derived from a C_1-C_6 carboxylic acid, and as such will give rise to vinyl esters with R^1 being at most a C_5 alkyl chain, which is outside the scope of the current claim 1.

With respect to obviousness, Kud teaches a further essential element other than N-vinyl pyrrolidone and a vinyl ester, so one of ordinary skill in the art would somehow have to be motivated to disregard part a) and furthermore be motivated to make an actual copolymer, and not a graft polymer from the remaining parts b) and c). Finally, one would need to be motivated to work outside the disclosed range of vinyl esters derived from C_1-C_6 carboxylic acids. This would be unlikely as by looking at the teaching of Kud, i.e. the preferential embodiments, Kud clearly teaches at col. 2, lines 34-45, especially lines 43-44, that of the compounds capable of producing a vinyl ester, (vinyl acetate and vinyl propionate), they should be the short alkyl chain versions. These are examples of C_1 and C_2 vinyl esters, and as such differs from the present claim which recites vinyl esters with hydrophobic alkyl chains.

Laporte discloses a detergent composition comprising: a) a surfactant material, b) an amphiphilic carboxy containing polymer comprising (i) monomer units comprising a carboxylate or carboxylic acid group and (ii) uncharged monomer units; and c) an uncharged polymer which can be polyvinylpyrrolidone. There are two (possibly) disclosures here, whether the combination of b) and c) can be a copolymer as per claim 1, or whether components (i) and (ii) combined can be classed a copolymer as per claim 1.

Clearly the first instance of b) + c) cannot be anticipating claim 1, as component c) is already a polymer (polyvinylpyrrolidone), so cannot be copolymerised with a vinyl ester and hence cannot be a copolymer as claimed in claim 1. Turning to the second possible disclosure of the amphiphilic carboxy containing polymer itself, this requires a monomer of class (i) and a monomer of class (ii). Disclosed in class (ii) are vinylpyrrolidone and vinyl esters, but, they are only disclosed as possibilities for copolymerisation with monomers of class (i), which are carboxylate or carboxylic acid monomers. Therefore, the copolymerisation of vinylpyrrolidone and a vinyl ester as per claim 1 of the current application is not

disclosed by Laporte. Thus, Laporte does not appear to teach or suggest a copolymer of vinylpyrrolidone and a vinyl ester, let alone one which would produce a hydrophobically modified polymer which is the subject matter of claim 1.

GB '082 discloses copolymers of N-vinylpyrrolidone and a vinyl ester of a carboxylic acid and their use in cosmetics. The vinyl ester taught as essential by GB '082 contains a cyclic group (see abstract). Such a cyclic ester is present in every embodiment of the disclosure of GB '082, and as such falls outside the possible groups for R^1. 'Cyclic' is different from 'linear or branched'. Although additional non-cyclic vinyl esters are described on page 2, lines 23 onwards that may be incorporated into the copolymer and which may fall arguably, within the scope of claim 1, each copolymer will still include some cyclic monomer. Therefore the copolymer of claim 1 is not disclosed in GB '082.

Furthermore, GB '082 does not disclose any anionic surfactants, nor linear alkyl benzene sulphonate recited by the present claims and does not disclose a laundry detergent composition. Instead, disclosed are hair care compositions (see hair lacquer and wave-setting lotions in abstract and examples and shampoos in examples).

In light of the above amendments and remarks, it is respectfully requested that the rejections be reconsidered and the application be allowed to issue.

If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,

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